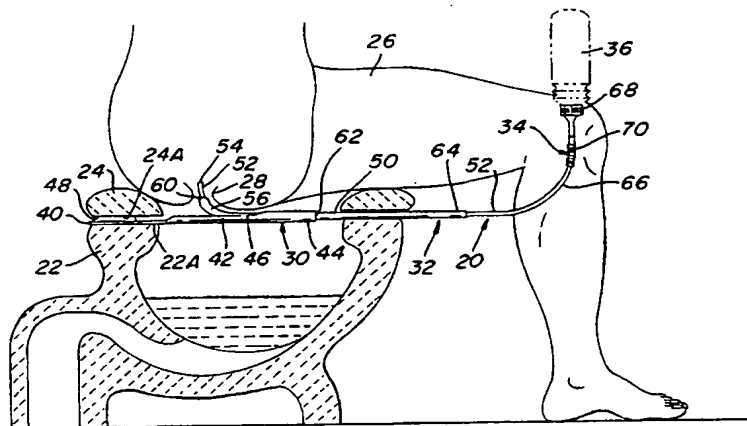


INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

(51) International Patent Classification ⁵ : A61M 3/02, 31/00, E03D 9/08	A1	(11) International Publication Number: WO 94/25087 (43) International Publication Date: 10 November 1994 (10.11.94)
(21) International Application Number: PCT/US94/04412 (22) International Filing Date: 21 April 1994 (21.04.94) (30) Priority Data: 08/052,319 23 April 1993 (23.04.93) US (71) Applicant: KENSEY NASH CORPORATION [US/US]; Marsh Creek Corporate Center, Suite 204, 55 East Uwchlan Avenue, Exton, PA 18976 (US). (72) Inventors: KENSEY, Kenneth; 8 Hickory Lane, Chester Springs, PA 19425 (US). KAUFMANN, Joseph; 809 North Stillman, Philadelphia, PA 19130 (US). (74) Agent: FAIGUS, Martin, L.; Caesar, Rivise, Bernstein, Cohen & Pokotilow, Ltd., Seven Penn Center, 12th floor, 1635 Market Street, Philadelphia, PA 19103-2212 (US).		(81) Designated States: AU, BB, BG, BR, BY, CA, CN, CZ, FI, HU, JP, KP, KR, KZ, LK, MG, MN, MW, NO, NZ, PL, RO, RU, SD, SK, UA, VN, European patent (AT, BE, CH, DE, DK, ES, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE), OAPI patent (BF, BJ, CF, CG, CI, CM, GA, GN, ML, MR, NE, SN, TD, TG). Published <i>With international search report.</i> <i>Before the expiration of the time limit for amending the</i> <i>claims and to be republished in the event of the receipt of</i> <i>amendments.</i>

(54) Title: DEVICE FOR IRRIGATING A NATURAL BODY ORIFICE OF A PERSON SEATED ON A TOILET

**(57) Abstract**

A device (20) for administering a liquid (38) into the body of a person through a natural orifice (28), e.g., the anus or vagina, while the person is seated on a toilet (22). The device comprises a base unit (30), an extendable tube (32) having a distal end (60), and a vessel (36) containing the liquid (38) for introduction into the person. The base unit (30) comprises a saddle (42) arranged for disposition under the toilet seat (24) and configured to be disposed between the buttocks (26) of the person when he/she is seated on the seat (24). A positionable guide tube (50) extends through a portion of the saddle (42) from an entrance point (62) adjacent the front of the toilet (22) to an opening (46) located at a position adjacent the natural orifice (28), e.g., anus or vagina, when the person is seated. The extendable tube (52) has a distal end portion (54) arranged to be inserted by the person into the guide tube (50) and through the opening (46), and the guide tube (50) is arranged to be slid with respect to the saddle (42), so that the distal end portion (54) of the extendable tube (52) is directed upward and enters the natural orifice (28). The vessel (36) is coupled to the extendable tube (52) by a pump (34) and associated connector (72) so that the liquid (38) within the vessel (36) can be pumped through the extendable tube (52) into the person's body.

DEVICE FOR IRRIGATING A NATURAL BODY ORIFICE
OF A PERSON SEATED ON A TOILET

SPECIFICATION

BACKGROUND OF THE INVENTION

This invention relates generally to medical devices and more particularly to devices which are suitable for use by a lay person to readily self-administer any type of irrigation or therapeutic agent into the person's anus or vagina while that person is seated on a toilet.

One common problem with aged or infirm persons is the tendency to have fecal impactions, thereby necessitating an enema or some other similar procedure for relief. Prior art devices for providing an enema or otherwise irrigating the person's bowel leave much to be desired from the standpoint of ease of use. In this regard prior art devices tend to be generally somewhat difficult to insert through the anus by the aged or infirm.

In copending United States Patent Application, Serial Number 934,378 filed on August 24, 1992, entitled System For Introducing A Therapeutic Agent Into The Rectum, which is assigned to the same assignee as this invention and whose disclosure is incorporated by reference herein there is disclosed a system and method which overcomes much of the disadvantages of the prior art. Specifically that system basically comprises a device for administering a liquid into the bowel of a person through the person's anus. The device includes an introducer and an associated manually actuatable pump and reservoir. The introducer comprises a relatively rigid hollow conduit, e.g., a J-shaped tube, having a curved distal section and an elongated proximal section. The curved distal section terminates at a free end in the form of a tip configured for ready passage into the anus. The elongated section of the conduit has a proximal end and is sufficiently long that when the person is seated on a toilet with the proximal end located between the person's legs adjacent the person's thighs the tip is located at the person's anus. Thus, the person can readily insert the tip into the anus by manually manipulating the proximal section of the conduit. The free end of the conduit has at least one aperture therein. The pump is coupled to the proximal section of the conduit and

adjacent the natural orifice, e.g., the anus, of the person when that person is seated on the toilet seat.

The extendable tube means has a distal end portion arranged to be inserted into the passageway and through the opening so that the distal end portion of the tube means enters the natural orifice of the person to carry the material, e.g., the liquid, into the person's body through that orifice.

In accordance with one preferred embodiment of the invention the material introduced into the patient's body is provided from fluid supply means. That means is arranged to be coupled to the extendable tube means to provide, e.g., pump, the fluid, e.g., a liquid, through the extendable tube means into the internal portion, e.g., the rectum, of the person.

BRIEF DESCRIPTION OF THE DRAWING

Other objects and many of the attendant advantages of this invention will be readily appreciated as the same becomes better understood by reference to the following detailed description when considered in connection with the accompanying drawings wherein:

Fig. 1 is an isometric view of a device constructed in accordance with this invention;

Fig. 2 is a side elevational view, partially, in section showing the device of Fig. 1 in one typical use, e.g., to introduce a liquid into the rectum of a person;

Fig. 3 is an enlarged side elevational view, partially in section, showing a portion of the device shown in Fig. 2;

Fig. 4 is an enlarged sectional view taken along line 4 -4 of Fig. 3;

Fig. 5 is an enlarged sectional view taken along line 5 -5 of Fig. 3; and

Fig. 6 is an enlarged sectional view taken along line 6 -6 of Fig. 3.

DETAILED DESCRIPTION OF THE PREFERRED EMBODIMENT

Referring now in greater detail to the figures there is shown at 20 in Fig. 1 one embodiment of a device constructed in accordance with this invention. The device 20 is arranged to

e.g., an adhesive, to the top surface of the plate 40. The pad 48 is of a sufficient thickness so that when the base unit 30 is in place, like shown in Fig. 2, the undersurface 24A of the rear of the toilet seat 24 tightly engages the top surface of the pad 48, while the underside of the plate 40 rests on the top surface of the bowl's rim 22A. Thus, when the user 26 is seated on the toilet seat, the base unit 30 is tightly interposed between the undersurface of the toilet seat and the top surface of the rim of the toilet bowl so that the device 20 is held in place by friction.

The base unit 30 is designed to be centered over the toilet bowl and oriented so that it extends from the rear of the bowl toward the front of the bowl. In particular, the free end of the front portion 44 of the base unit 30 terminates closely adjacent the front rim of the toilet bowl. A portion of the extendable tube assembly 32 (to be described shortly hereafter) extends through the tubular portion of the base unit 30 and projects outward beyond the free end of the front portion 44 of the base unit. This portion of the extendable tube assembly also extends over and rests on the top surface of the front rim of the toilet bowl. In such an arrangement the elongated intermediate saddle portion 42 of the base unit 30 is generally centered and spans over the bowl between the front and the back thereof.

As can be seen clearly in Figs. 3 - 6, the extendable tube assembly 32 basically comprises a guide member 50 and a liquid conveying conduit 52. The guide member 50 serves to receive the conduit 52 therein and to guide the distal free end 54 of the conduit into the anus (or vagina) of the user, as will be described later. The guide member 50 is a tube formed of any suitable rigid material, e.g., a plastic or cardboard, and is linear except for its distal end section 56, which is arcuate. A central passageway 58 extends through the entire length of the tubular guide member 50 so that its distal end 60 is open, as is its proximal end 62. The guide member 50 is arranged to be received in the base unit 30 for longitudinal movement therealong. In particular, the guide member 50 is located within the tubular portion of the base unit 30 so that the arcuate end

end 60 of the guide member 50 is disposed under the anus or vagina of the user. This is accomplished by the user of the device grasping the handle section 64 of the guide member and either sliding it forward or backward as required. When the free end 54 of the conduit is immediately adjacent, and preferably slightly forward of the anus or vagina, as the case may be, the person can then slide the guide member 50 slightly to the rear to cause the free end 54 to enter the anus or vagina. Entry of the free end 54 of the conduit 52 into the anus or vagina can be expedited by the user grasping the portion of the conduit 52 extending beyond the open end 62 of the guide member to slide the conduit to the rear with respect to the guide member.

The distal end 54 or tip of the conduit 52 is designed so that it can, without trauma, readily enter the anus or vagina when directed thereto and a modest force applied. To that end the material making up conduit 50, e.g., a firm silicone elastomer, is resistant to longitudinal collapse. Moreover, its tip is somewhat rounded. One particularly effective shape for the tip is that of the COMFORTIP^(TM) tip used on the disposable squeeze bottle of the enema product sold by C.B. Fleet Company, Inc., of Lynchburg VA under the registered trademark FLEET.

Once the open end or tip 54 of the liquid carrying conduit 52 has passed through the natural body opening to the desired position within the user's body, e.g., through the anus and into the rectum, the device 20 is ready to be used to introduce the liquid 38. As mentioned earlier that liquid is held within the bottle or vessel 36.

In accordance with one preferred aspect of this invention the pump/supply assembly 34 includes a threaded cap 68 for connection to various, self-contained or bottled commercial enemas or douches. Thus, when the device 20 is used for giving an enema, a conventional bottled enema product, such as that sold under the registered trademark NATURE'S REMEDY by SmithKline Beecham, and which is contained within the bottle designated by the registered trademark FLEX-NECK, may be used with it. That product basically comprises a liquid contained within bottle 36 having a cylindrical body 76 and a corrugated end 78 terminating

slightly with respect to the base unit to align the outlet with the anus.

Irrespective of the application, the subject invention provides aged or infirm persons, or others with limited flexibility, with a viable means for gaining access to the rectum or vagina without contortion. While the device of this invention is arranged to enable the self-administration of the irrigation and/or therapeutic liquid, it is of course apparent that it may be used on a person by an aide if the person is incapable or does not desire to use the device on himself/herself.

Without further elaboration the foregoing will so fully illustrate our invention that others may, by applying current or future knowledge, adopt the same for use under various conditions of service.

4. The device of Claim 2 characterized in that said liquid supply means (34) comprises pumping means (70) connected to said extendable tube means (32) and a vessel (78) arranged to be releasably secured to said pumping means.

5. The device of Claim 1 wherein the toilet seat comprises a front and a rear, and wherein said device is further characterized in that said passageway means (50) comprises an elongated tubular member having one end at which said opening (60) is located and which extends generally horizontally from said one end through said saddle means to an entrance point (62) in said saddle means located adjacent the front of the toilet seat, and wherein said passageway means (50) is configured to direct said distal end (52) of said extendable tube means (32) generally upward for passage through said opening (60) and into the natural orifice (28) of the person.

6. The device of Claim 2 wherein said toilet seat comprises a front and a rear, and wherein said device is further characterized in that said passageway means (50) comprises an elongated tubular member having one end at which said opening (60) is located and which extends generally horizontally from said one end through said saddle means to an entrance point in said saddle means located adjacent the front of the toilet seat, and wherein said passageway means (50) is configured to direct said distal end (52) of said extendable tube means (32) generally upward for passage through said opening (60) and into the natural orifice (28) of the person.

7. The device of Claim 6 characterized in that said liquid supply means (34) additionally comprises pumping means (70) and extendable tube means (66) for pumping said liquid (38).

8. The device of Claim 7 characterized in that said pumping means (70) is arranged to be operated manually.

9. The device of Claim 8 characterized in that said pumping means (70) comprises a cylindrical member having a corrugated sidewall arranged to be manually compressed longitudinally.

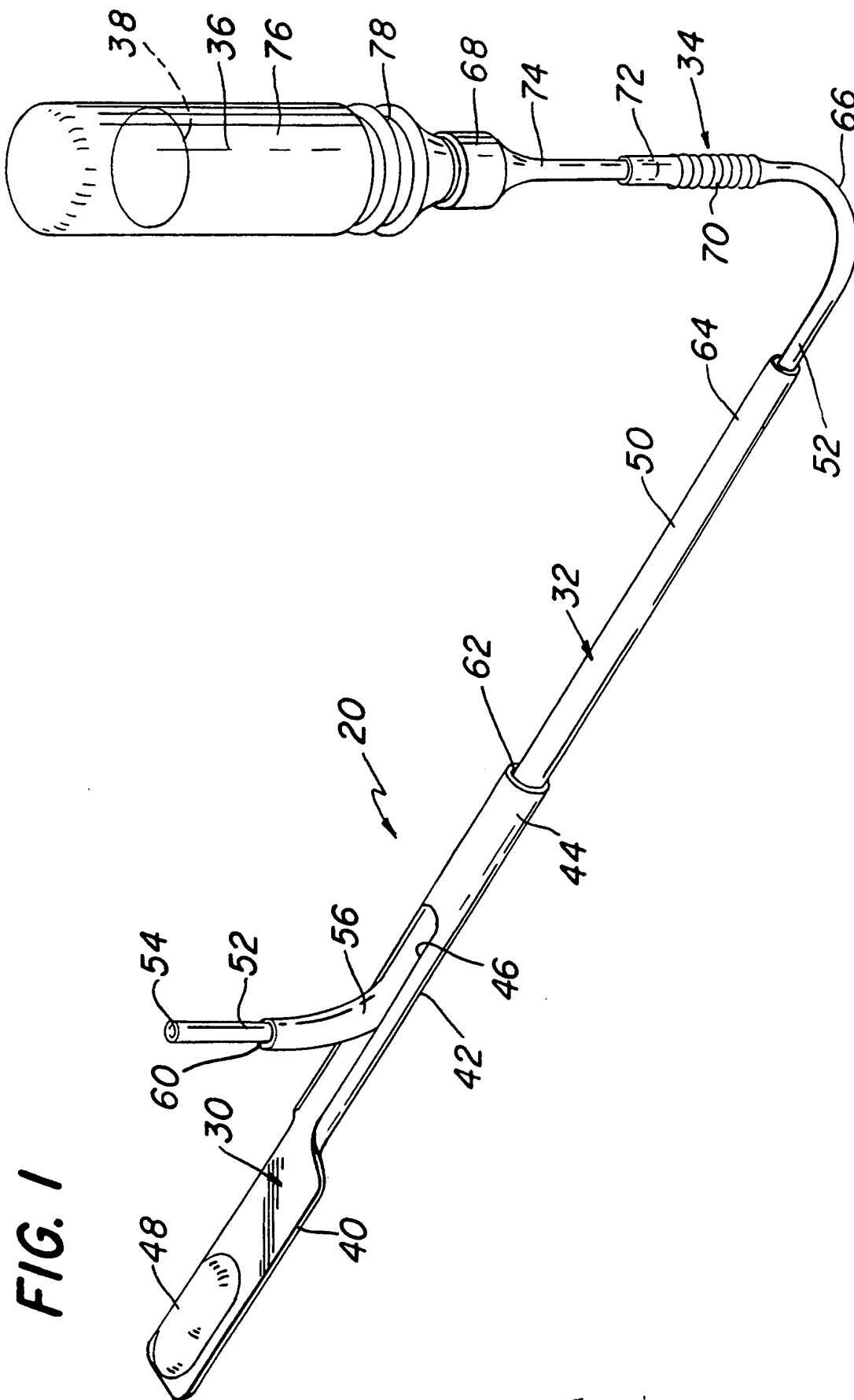


FIG. 3

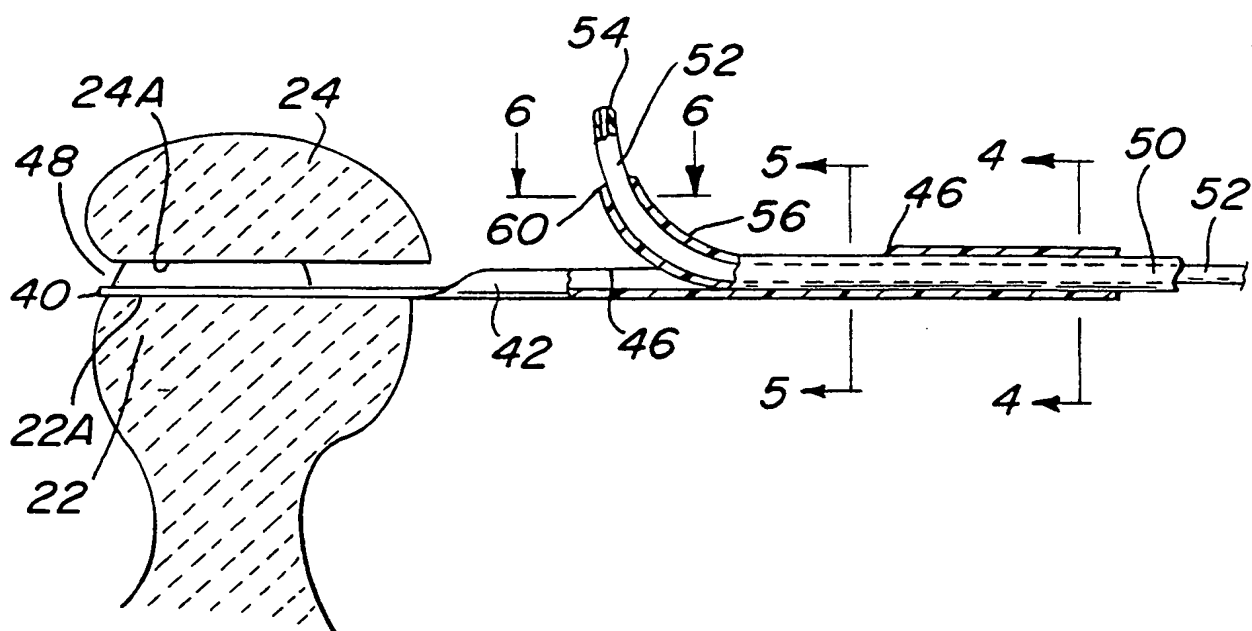
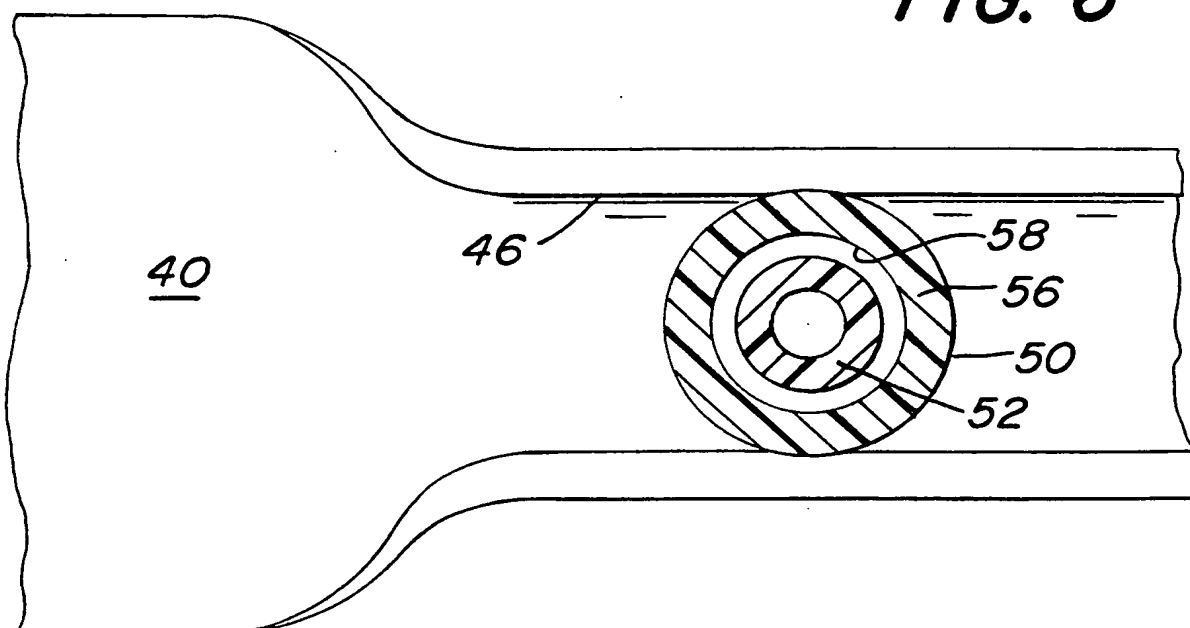


FIG. 6



ANHANG

zum internationalen Recherchen-
bericht über die internationale
Patentanmeldung Nr.

ANNEX

to the International Search
Report to the International Patent
Application No.

ANNEXE

au rapport de recherche inter-
national relatif à la demande de brevet
international n°

PCT/US 94/04412 SAE 89547

In diesem Anhang sind die Mitglieder
der Patentfamilien der im obenge-
nannten internationalen Recherchenbericht
angeführten Patentedokumente angegeben.
Diese Angaben dienen nur zur Unter-
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This Annex lists the patent family
members relating to the patent documents
cited in the above-mentioned inter-
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La présente annexe indique les
membres de la famille de brevets
relatifs aux documents de brevets cités
dans le rapport de recherche inter-
national visée ci-dessus. Les renseigne-
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Im Recherchenbericht angeführtes Patentedokument Patent document cited in search report Document de brevet cité dans le rapport de recherche	Datum der Veröffentlichung Publication date Date de publication	Mitglied(er) der Patentfamilie Patent family member(s) Membres de la famille de brevets	Datum der Veröffentlichung Publication date Date de publication
US A 2583298		keine - none - rien	
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